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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/630,138	07/29/2003	Charles D. Gollnick	14206US02	7159
23446	7590	09/21/2007	EXAMINER	
MCANDREWS HELD & MALLOY, LTD 500 WEST MADISON STREET SUITE 3400 CHICAGO, IL 60661				SOBUTKA, PHILIP
ART UNIT		PAPER NUMBER		
2618				
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Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary	Application No.	Applicant(s)
	10/630,138	GOLLNICK ET AL.
	Examiner	Art Unit
	Philip J. Sobutka	2618

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) Responsive to communication(s) filed on 04 August 2006.
- 2a) This action is **FINAL**. 2b) This action is non-final.
- 3) Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) Claim(s) 38-46, 48, 49, 52 and 56-246 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) Claim(s) 38-46, 52, 56-156, 187-246 is/are allowed.
- 6) Claim(s) 48, 49 and 157-186 is/are rejected.
- 7) Claim(s) _____ is/are objected to.
- 8) Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) The specification is objected to by the Examiner.
- 10) The drawing(s) filed on 25 May 1999 is/are: a) accepted or b) objected to by the Examiner. Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a). Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
 - a) All b) Some * c) None of:
 1. Certified copies of the priority documents have been received.
 2. Certified copies of the priority documents have been received in Application No. _____.
 3. Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) Notice of References Cited (PTO-892)
- 2) Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date _____.
- 4) Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____.
- 5) Notice of Informal Patent Application (PTO-152)
- 6) Other: _____.

DETAILED ACTION

Claim Rejections - 35 USC § 103

1. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

2. This application currently names joint inventors. In considering patentability of the claims under 35 U.S.C. 103(a), the examiner presumes that the subject matter of the various claims was commonly owned at the time any inventions covered therein were made absent any evidence to the contrary. Applicant is advised of the obligation under 37 CFR 1.56 to point out the inventor and invention dates of each claim that was not commonly owned at the time a later invention was made in order for the examiner to consider the applicability of 35 U.S.C. 103(c) and potential 35 U.S.C. 102(e), (f) or (g) prior art under 35 U.S.C. 103(a).

3. Claims 48,49, 157-186 are rejected under 35 U.S.C. 103(a) as being unpatentable over Hoff (US 5,168,271) in view of Owen (GB 2250892).

Consider claim 48.

(Note that it is not clear whether "the selected time intervals *in a sleep mode*" are the same time intervals selected for transmission of the pending message list as noted in the preamble. For the purposes of this rejection, they have not been treated as the same.)

Hoff teaches a data communication method for a system having one or more base stations and at least one roaming terminal having a radio frequency transceiver (*Hoff see especially figure 2A*) comprising:

synchronizing the activation of the terminal's radio frequency transceiver to receive the pending message list following a sleep mode (*Hoff see especially column 4, line 58 – column 5, line 25, column 17, lines 15-35, column 22, lines 40-65*).

Hoff lacks a teaching of deactivating the roaming terminal's transceiver through a plurality of the selected time intervals in a sleep mode.

Owen teaches a system in which roaming terminals selectively deactivate the terminal's radio frequency transceiver through a plurality of the selected time intervals in a sleep mode and synchronize the activation of the terminal's radio frequency transceiver to receive a beacon following the plurality of the selected time intervals (*Owen see especially page 3, line 10 – page 4, line 18*). Owen teaches that this allows for enhanced power saving when the roaming terminal has roamed out of coverage range (*Owen see page 3, lines 29-35*).

It would have been obvious to one of ordinary skill in the art to modify Hoff to have the roaming terminals selectively deactivate through a plurality of the time intervals in order to enhance power saving when the terminal has roamed out of range as taught by Owen.

As to claim 49, Hoff in view of Owen as applied to claim 48 teaches the step of transmitting timing information regarding the selected time intervals from a base station.

Consider claim 157. Hoff lacks a teaching of the method of claim 48, wherein the transceiver of the roaming terminal is a spread spectrum transceiver. Official Notice is taken that it is notoriously well known in the art to use spread spectrum transmission. Therefore it would have been obvious to one of ordinary skill in the art to modify Hoff as shown in the claims in order to utilize an interference resistant modulation system.

Consider claim 158. Hoff teaches the method of claim 48, wherein the communication system comprises a plurality of base stations, each of which corresponds to a respective coverage area (*Hoff see especially figure 2A*).

Consider claim 159. Hoff lacks a teaching of the method of claim 48, further comprising activating the transceiver to receive a pending message list for up to a maximum listening period, where the maximum listening period is at least a maximum expected time interval between consecutive pending message list transmissions. Note that that interval would be the maximum time interval between messages. Therefore it would have been obvious to one of ordinary skill in the art to modify Hoff as shown in the claims to fit this system constraint.

Consider claim 160. Hoff teaches the method of claim 48, further comprising determining whether to consider a received pending message list transmission based, at least in part, on signal strength. Note that, of course reception would not be possible if the signal strength were too low.

Consider claim 161. Hoff teaches the method of claim 48, wherein the roaming terminal comprises a hand-held terminal (*Hoff see especially figures 1A, 2A*).

Consider claim 162. Hoff lacks a teaching of the method of claim 48, further comprising performing batch file transfer between the roaming terminal and a base station of the communication system. Official Notice is taken that it is notoriously well known in the art to use batch processing of messages. Therefore it would have been obvious to one of ordinary skill in the art to modify Hoff as shown in the claims in order to utilize a high efficiency method.

Consider claim 163. Hoff lacks a teaching of the method of claim 48, further comprising performing on-line data entry with the roaming terminal. Official Notice is taken that it is notoriously well known in the art to perform data entry with roaming terminals. Therefore it would have been obvious to one of ordinary skill in the art to modify Hoff as shown in the claims in order to allow for ease of data entry

Consider claim 164. Hoff lacks a teaching of the method of claim 48, further comprising calculating an expected time for a pending message list transmission. Official Notice is taken that it is notoriously well known in the art to calculate transmission times. Therefore it would have been obvious to one of ordinary skill in the art to modify Hoff as shown in the claims in order to ensure that time for transmissions were adequate.

Consider claim 165. Hoff lacks a teaching of the method of claim 48, further comprising calculating an expected time for a pending message list transmission based, at least in part, on timing information received with a previous pending message list transmission. Official Notice is taken that it is notoriously well known in the art to utilize current system data in monitoring. Therefore it would have been obvious to one of

ordinary skill in the art to modify Hoff as shown in the claims in order to ensure that calculations were based on current system data.

Consider claim 166. Hoff lacks a teaching of the method of claim 48, further comprising calculating an expected time for a pending message list transmission based, at least in part, on seed information received in a previous transmission. Official Notice is taken that it is notoriously well known in the art to use seed information. Therefore it would have been obvious to one of ordinary skill in the art to modify Hoff as shown in the claims in order to perform data transmission as efficiently as possible.

Consider claim 167. Hoff in view of Owen teaches the method of claim 48, wherein deactivating the roaming terminal's transceiver comprises powering down circuitry of the transceiver (*Owen see especially page 3, line 10 – page 4, line 18*).

Consider claim 168. Hoff lacks a teaching of the method of claim 48, further comprising determining a sleep time period based, at least in part, on an expected duration of a communication between another roaming terminal and a base station of the communication system. Official Notice is taken that it is notoriously well known in the art to take current system conditions into account for transmission. Therefore it would have been obvious to one of ordinary skill in the art to modify Hoff as shown in the claims in order to ensure that current system conditions were taken into account.

Consider claim 169. Hoff lacks a teaching of the method of claim 48, further comprising determining a sleep time period based, at least in part, on message length information communicated between another roaming terminal and a base station of the communication system. Official Notice is taken that it is notoriously well known in the

art to take current system conditions into account for transmission. Therefore it would have been obvious to one of ordinary skill in the art to modify Hoff as shown in the claims in order to ensure that current system conditions were taken into account.

Consider claim 170. Hoff lacks a teaching of the method of claim 48, further comprising determining a sleep time period based, at least in part, on message length information transmitted by another roaming terminal. Official Notice is taken that it is notoriously well known in the art to take current system conditions into account for transmission. Therefore it would have been obvious to one of ordinary skill in the art to modify Hoff as shown in the claims in order to ensure that current system conditions were taken into account.

Consider claim 171. Hoff in view of Owen teaches the method of claim 48, wherein the pending message list comprises information of messages stored for a plurality of sleeping terminals (*Hoff see especially column 4, line 58 – column 5, line 25, column 17, lines 15-35, column 22, lines 40-65*).

Consider claim 172. Hoff teaches the method of claim 48, wherein the pending message list comprises information indicating that a message awaits delivery to the roaming terminal (*Hoff see especially column 4, line 58 – column 5, line 25, column 17, lines 15-35, column 22, lines 40-65*).

Consider claim 173. Hoff teaches the method of claim 48; wherein the pending message list comprises information from which the roaming terminal determines whether a message awaits delivery to the roaming terminal (*Hoff see especially column 4, line 58 – column 5, line 25, column 17, lines 15-35, column 22, lines 40-65*).

Consider claim 174. Hoff teaches the method of claim 48, further comprising determining from a received pending message list whether a message for the roaming terminal is awaiting delivery (*Hoff see especially column 4, line 58 – column 5, line 25, column 17, lines 15-35, column 22, lines 40-65*).

Consider claim 175. Hoff teaches the method of claim 48, further comprising in response to a received pending message list indicating that a message awaits delivery to the roaming terminal, directing the transceiver to transmit a message requesting delivery of one or more pending messages to the roaming terminal (*Hoff see especially column 4, line 58 – column 5, line 25, column 17, lines 15-35, column 22, lines 40-65*).

Consider claim 176. Hoff teaches the method of claim 48, wherein the pending message list comprises information indicating that one or more messages are stored at a node of the communication system and awaiting delivery to the roaming terminal (*Hoff see especially column 4, line 58 – column 5, line 25, column 17, lines 15-35, column 22, lines 40-65*).

Consider claim 177. Hoff teaches the method of claim 48, wherein the pending message list comprises information indicating that one or more messages are stored in a base station of the communication system and awaiting delivery to the roaming terminal (*Hoff see especially column 4, line 58 – column 5, line 25, column 17, lines 15-35, column 22, lines 40-65*).

Consider claim 178. Hoff teaches the method of claim 48, further comprising operating the roaming terminal in an awake state if a predetermined number of

expected signals from the communication system are not received (*Hoff* see especially column 4, line 58 – column 5, line 25, column 17, lines 15-35, column 22, lines 40-65).

Consider claim 179. *Hoff* in view of *Owen* teaches the method of claim 48, further comprising determining a number of the selected time intervals in which to deactivate the transceiver (*Owen* see especially page 3, line 10 – page 4, line 18).

Consider claim 180. *Hoff* teaches the method of claim 48, wherein the pending message list comprises information of mail messages awaiting delivery to the roaming terminal (*Hoff* see especially column 4, line 58 – column 5, line 25, column 17, lines 15-35, column 22, lines 40-65).

Consider claim 181. *Hoff* teaches the method of claim 48, further comprising causing circuitry of the roaming terminal to enter a sleep mode for at least a portion of an expected delay to receive a message in response to a message sent from the roaming terminal (*Owen* see especially page 3, line 10 – page 4, line 18).

Consider claim 182. *Hoff* teaches the method of claim 48, further comprising activating and deactivating particular circuitry of the roaming terminal in a consistent cycle (*Hoff* see especially column 4, line 58 – column 5, line 25, column 17, lines 15-35, column 22, lines 40-65).

Consider claim 183. *Hoff* teaches the method of claim 48, further comprising operating circuitry of the roaming terminal in an awake state for a first period of time if no message is received and for a second period of time, longer than the first period of time, if a message is received (*Owen* see especially page 3, line 10 – page 4, line 18).

Consider claim 184. Hoff lacks a teaching of the method of claim 48, further comprising operating circuitry of the roaming terminal in an awake state in response to a user input and continuing operating circuitry of the roaming terminal in the awake state for a fixed time period following the user input. Official Notice is taken that it is notoriously well known in the art to keep wireless devices on for a period of time after user input. Therefore it would have been obvious to one of ordinary skill in the art to modify Hoff as shown in the claims in order to ensure that the device was ready for additional input.

Consider claim 185. Hoff lacks a teaching of the method of claim 48, further comprising operating circuitry of the roaming terminal in an awake state for at least an entire duration of a communication session with the communication system. Official Notice is taken that it is notoriously well known in the art to keep wireless devices on for communication sessions. Therefore it would have been obvious to one of ordinary skill in the art to modify Hoff as shown in the claims in order to ensure that the entire communication was received.

Consider claim 186. Hoff lacks a teaching of the method of claim 48, further comprising operating circuitry of the roaming terminal in an awake state for a fixed time period following completion of a communication session with the communication system. Official Notice is taken that it is notoriously well known in the art to keep wireless devices on for a period of time after use. Therefore it would have been obvious to one of ordinary skill in the art to modify Hoff as shown in the claims in order to ensure that the device was ready for additional communication.

Allowable Subject Matter

4. Claims 38-46, 52,56-156,187-246 are allowed for reasons presented in the previous action.

Conclusion

5. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Philip J Sobutka whose telephone number is 571-272-7887. The examiner can normally be reached Monday through Friday from 8:30 - 5:00.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Matthew D. Anderson can be reached on 571-272-4711.

6. The central fax phone number for the Office is 571-273-8300.

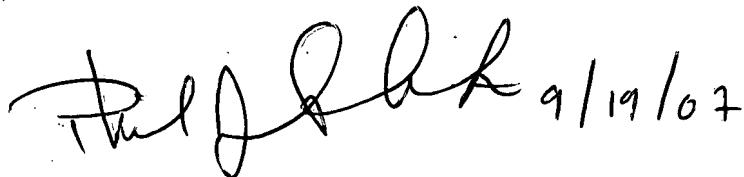
Most facsimile-transmitted patent application related correspondence is required to be sent to the Central FAX Number.

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7. Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only.

Art Unit: 2618

For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).



9/19/07

PHILIP J. SOBUTKA
PATENT EXAMINER

Philip J Sobutka

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